



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,479	01/09/2002	Viktors Berstis	AUS920011009US1	6080

7590 07/03/2006
Kelly K. Kordzik
5400 Renaissance Tower
1201 Elm Street
Dallas, TX 75270

EXAMINER

DHARIA, PRABODH M

ART UNIT	PAPER NUMBER
----------	--------------

2629

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,479

Applicant(s)

BERSTIS, VIKTORS

Examiner

Prabodh M. Dharia

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-10 and 55-57 is/are pending in the application.
- 4a) Of the above claim(s) 1 and 11-54 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-10 and 55-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2629

1. **Status:** Please all the replies and correspondences should be addressed to examiner's new art unit 2629. Receipt is acknowledged of papers submitted on 05-22-2006 under amendments and new claims, which have been placed of record in the file. Claims 2-10 and 55-57 are pending in this action and 1 and 11-54 are cancelled.

Response to Amendment

2. The amendment filed on 05-22-2006 has not introduced any new matters into claims disclosure. The added material which is supported by the original disclosure.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-6 and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (5,903,243) in view of Ferguson (US 2005/0093796A1).

Regarding Claim 5,6, Jones teaches a method for producing a stereoscopic image from a display (Col. 5, Lines 21-40) having N addressable pixels (Col. 3, Lines 48-51, Col. 5, Lines 53-56, Lines 5-12); optical element for selectively directing light of said N pixels of said image (Col. 7, Line 32-41, Lines 57-63, Col. 8, Lines 4-11) comprises: a prism/lense element oriented

Art Unit: 2629

over each of said N pixels (Col. 18, Lines 16-19, Col. 9, Lines 25-30, Col. 8, Lines 4-7, Col. 10, Lines 30-46); N optical elements coupled to a piezoelectric element or electrostatic force producing elements (Col. 9, Lines 25-30, Col. 8, Lines 4-7, Col. 10, Lines 30-46) for modifying an orientation of said prism/lens element relative (Col. 8, Lines 4-8, Col. 10, Lines 30-46) to each corresponding pixel of said display (Col. 18, Lines 16-19) in response to one of said N control signals (Col. 19, Lines 14-21, Col. 15, Lines 1-8).

However, Jones fails to recite or disclose specifically, the steps of: generating N pixels of a first frame of an image directed to a view of an object a user experiences when said object is observed by said viewer's right eye; generating N pixels of a second frame of said image directed to a view of said object a user experiences when said object is observed by said viewer's left eye; receiving light from said N pixels in N optical elements for selectively directing light of said N pixels to said right eye in response to a first set of states of N corresponding control signals and to said left eye in response to a second set of states of said N control signals; directing light from each of said N pixels of said first frame of said image to said right eye in a first time period by applying said first set of states of said N control signals to said N optical elements; and directing light from said N pixels of said second frame of said image to said left eye in a second time period by applying said second set of states of said N control signals to said N optical elements.

However, Ferguson teaches a method for producing a stereoscopic image from a display (page 11, paragraphs 149,150) having N addressable pixels (page 12, paragraph 154, Lines 5,6,9,10, teaches plurality of pixels same as "N" pixels where the "N" is an arbitrary or any number, page 7, paragraph 106,107 teaches addressable pixels) comprising the steps of: generating N pixels of a first frame of an image directed to a view of an object a user experiences

Art Unit: 2629

when said object is observed by said viewer's right eye (page 11, paragraph 149, Lines 7-15 since the image viewed by each eyes are different it is obvious they are different frames of the stereoscopic image); generating N pixels of a second frame of said image directed to a view of said object a user experiences when said object is observed by said viewer's left eye (page 11, paragraph 149, Lines 7-18, since the image viewed by each eyes are different it is obvious they are different frames of the stereoscopic image); receiving light from said N pixels in N optical elements for selectively directing light of said N pixels to said right eye in response to a first set of states of N corresponding control signals and to said left eye in response to a second set of states of said N control signals (figure 9, page 11, paragraph 149, Lines 7-18); directing light from each of said N pixels of said first frame of said image to said right eye in a first time period by applying said first set of states of said N control signals to said N optical elements (page 11, paragraph 149, Lines 7-18); and directing light from said N pixels of said second frame of said image to said left eye in a second time period by applying said second set of states of said N control signals to said N optical elements. (page 11, paragraphs 148-151).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Fergason into teaching of Jones to be able to have a optical display system with active, passive dithering using birefringence color image super-positioning, and display enhancement with phase coordinated polarization switching.

Regarding Claims 2-4,55-57, Jones fails to disclose first and second time periods corresponds to one half the period of a frame rate such that said first and second frames of said image of said object appear as a stereoscopic image to said viewer; the step of: selectively

Art Unit: 2629

biasing said first and second sets of states of said N control signals to optimize said stereoscopic image perceived by said viewer; the step of: selectively biasing said first and second sets of states of said N control signals to optimize said stereoscopic image perceived by said viewer.

However, Ferguson teaches first and second time periods corresponds to one half the period of a frame rate such that said first and second frames of said image of said object appear as a stereoscopic image to said viewer (page 21, paragraphs 227,228, where each frames divided in half and half the pixels are displayed at a time); the step of: selectively biasing said first and second sets of states of said N control signals to optimize said stereoscopic image perceived by said viewer (page 30, paragraph 306, page 27, paragraphs 281,282); selectively adjusting biases of said first and second set of states to compensate for variations in said display (page 30, paragraph 306, page 27, paragraphs 281,282).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Ferguson into teaching of Jones to be able to have a optical display system with active, passive dithering using birefringence color image super-positioning, and display enhancement with phase coordinated polarization switching; providing optimized stereoscopic image by selectively biasing.

5. Claims 7-10,are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (5,903,243) in view of Ferguson (US 2005/0093796A1) as applied to claims 2-6 and 55-57 above, and further in view of Seibel (US 2001/0055462 A1).

Regarding Claims 7 -10 Jones teaches a method for producing a stereoscopic image from a display (Col. 5, Lines 21-40) having N addressable pixels (Col. 3, Lines 48-51, Col. 5, Lines 53-56, Lines 5-12); optical element for selectively directing light of said N pixels of said image (Col. 7, Line 32-41, Lines 57-63, Col. 8, Lines 4-11) comprises: a prism/lense element oriented over each of said N pixels (Col. 18, Lines 16-19, Col. 9, Lines 25-30, Col. 8, Lines 4-7, Col. 10, Lines 30-46); N optical elements coupled to a piezoelectric element or electrostatic force producing elements (Col. 9, Lines 25-30, Col. 8, Lines 4-7, Col. 10, Lines 30-46) for modifying an orientation of said prism/lens element relative (Col. 8, Lines 4-8, Col. 10, Lines 30-46) to each corresponding pixel of said display (Col. 18, Lines 16-19) in response to one of said N control signals (Col. 19, Lines 14-21, Col. 15, Lines 1-8).

However, Jones modified by Ferguson fails to recite or disclose electrostatic element bends a beam coupled to said prism/lense element and piezoelectric element rotates said prism/lense element around a torsional support beam.

Seibel discloses electrostatic element bends a beam coupled to said prism/lense element (Abstract Lines 3-7,10-12, page 7, paragraph 84, Lines 1-6, page 8, paragraph 92, Lines 1-21) piezoelectric element rotates said prism/lense element around a torsional support beam (page 2, paragraph 15, Lines 7-12, paragraph 16, Lines 1-7, page 7, paragraph 84, Lines 15-18, page 8, paragraph 91, Lines 21-26, pages 15,16 paragraph 12).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Seibel into teaching of Jones modified by Ferguson to be able to have a optical display system which will have bending of the beams and

Art Unit: 2629

rotates said prism/lense element around a torsional support beam to back-scattered the light to detectors to enhance topographical features.

Response to Arguments

6. Applicant's arguments, see remark, filed 05-22-2006, with respect to the rejection(s) of claim(s) 1-10 under non-final office action mailed on 02-24-2006 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Jones (5,903,243) and Seibel (US 2001/0055462 A1).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nelson (US 2001/0053016) Digital micro-mirror device and method for non-contacting, edge-coupled hidden hinge geometry.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

9. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2629

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks

Washington, D.C. 20231

PD

AU2673

February 16, 2006


BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY